

CLAIMS:

1. A two-stage screw compressor comprising two compressor stages that are parallel with respect to one another, each compressor stage having a pair of screw rotors that mesh together and are located in a respective rotor housing, each of the two rotor housings being surrounded by a coolant housing and being cooled by coolant that flows inside of the coolant housing, both rotor housings being enclosed at a distance by the coolant housing and the coolant housing having a coolant inlet and a coolant outlet designed such that the coolant that flows from the inlet to the outlet passes around and cools both rotor housings.
2. A screw compressor according to claim 1, characterized in that the coolant first passes around and cools essentially one rotor housing and then the other rotor housing along its flow path from the inlet to the outlet.
3. A screw compressor according to claim 2, characterized in that the coolant first flows around the rotor housing of the first compressor stage and then the rotor housing of the second compressor stage.
4. A screw compressor according to claim 1, characterized in that the flow path of the coolant proceeds in an S shape first around one compressor stage and then around the other compressor stage.
5. A screw compressor according to claim 1, characterized in that the intermediate space between the coolant housing and the rotor housings is partitioned by means of guide walls that force the cooling medium to take the prescribed flow path.
6. A screw compressor according to claim 1, characterized in that the rotor housings are designed as an integral block in one piece with at least a section of the coolant housing.

7. A screw compressor according to claim 1, characterized in that the coolant housing is designed essentially box-shaped with four sides that are parallel to the screw rotors of the compressor stages, and the compressor having four connections including a first compressor stage inlet, a first compressor stage outlet, a second compressor stage inlet and a second compressor stage outlet, one connection being located on each side of the coolant housing.
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